Manitoba Agriculture

GUIDELINES FOR ESTIMATING SWINE PRODUCTION COSTS

BASED ON A 150 SOW HERD, 2500 HOGS SOLD

89-04760/

Information Update

DATE: March, 1989

This publication is intended to provide a format and a set of guidelines for determining costs of production for a hog enterprise. The cost figures listed in this budget are estimates and not figures obtained from an actual survey of the hog industry in Manitoba. Adjustments will be necessary when applying these figures to your own enterprise. The assumptions on which the costs are based are outlined in the supporting pages. These assumptions were arrived at using the breeding stock, management practices, and facilities commonly employed on this size of an enterprise in Manitoba. Productivity and performance assumptions are based on data from national and provincial herd recording programs as well as data collected from numerous herds by feed companies and other organizations. Adjustments will be necessary where individual herd productivity and performance levels differ from those listed.

Accurate, up-to-date, production and financial records are essential for the effective application of these guidelines to an individual operation. Without such information accurate cost of production projections cannot be determined.

MG-15396

FARROW-FINISH PIG COST OF PRODUCTION

This publication is presented in three sections; farrow-finish, weaner and grower-finisher pig production. The weaner and grower-finisher enterprises are assumed to be separate entities. Each has its own feed mix-mill, office and loading space.

The one-page Farrow-Finish summary represents the union of the other two enterprises. Therefore, most of the costs shown in the Farrow-Finish summary are the sum of corresponding costs in the other two summaries. There are some exceptions to this, however, because some costs are eliminated when the weaner and grower-finisher enterprises join together. The savings gained by the farrow-finish enterprise are as follows:

1. No Marketing and transportation costs for weaner pigs are charged to the farrow-finish operation because weaner pigs are transferred to another barn on the same property.

2. No weanling cost is charged because pigs are not purchased, they are transferred.

3. No death loss is charged because no weanling cost is charged. Death loss of weaner pigs is already taken into account in the farrow-finish summary because costs are expressed on a "per pig sold" basis.

4. Only one office is required. The office in the farrowing enterprise is used in the farrow-finish summary.

5. Only one feed mix-mill is required. This reduces the cost of maintainance and repairs, insurance, depreciation and investment in equipment and buildings.

6. Interest on operating cost is calculated using the same method as in the farrowing enterprise.

FARROW-FINISH PIG COST OF PRODUCTION

A. OPERATING COSTS	Total	Your Cost	$/Hog Sold	Your Cost	$/Sow/Yr	Your Cost
1. Feed Costs:						
1.01 Sow Lactation Ration	$ 9,319		$ 3.74		$ 62.13	
1.02 Sow Gestation Ration	19,108		7.66		127.89	
1.03 Boar Ration	1,434		0.57		9.56	
1.04 Creep Feed	1,103		0.44		7.35	
1.05 Starter Ration	24,711		9.91		164.74	
1.06 Grower Ration	51,255		20.55		341.70	
1.07 Finisher Ration	88,917		35.65		592.78	
Total Feed Cost	$195,846		$ 78.52		$1,305.64	
2. Other Operating Costs:						
2.01 Vet, Med, & Supplies	$ 7,742		$ 3.10		$ 51.62	
2.02 Mtce. & Repairs	4,703		1.89		31.35	
2.03 Hydro (Heat)	10,345		4.15		68.96	
2.04 Insurance	4,179		1.68		27.86	
2.05 Manure Haulage	3,828		1.53		25.52	
2.06 Office Supplies	800		0.32		5.33	
2.07 Marketing & Trans.	5,612		2.25		37.41	
2.08 Sow Replacement	14,811		5.94		98.74	
2.09 Boar Replacement	2,723		1.09		18.15	
2.09 Stabilization Premium	7,482		3.00		49.88	
Subtotal Op. Costs	$258,070		$103.47		$1,745.41	
2.10 Interest on Op.	8,602		3.45		58.18	
TOTAL OPERATING COSTS	$266,672		$106.92		$1,803.59	
B. FIXED COSTS						
3. Depreciation:						
3.01 Buildings	$ 11,915		$ 4.78		$ 79.44	
3.02 Equipment	23,296		9.34		155.30	
Total Depreciation Cost	$ 35,211		$ 14.12		$ 234.74	
4. Investment:						
4.01 Buildings	$ 11,915		$ 4.78		$ 79.44	
4.02 Equipment	11,648		4.67		77.65	
4.03 Breeding Herd	6,900		2.77		46.00	
Total Investment Cost	$ 30,463		$ 12.21		$ 203.09	
TOTAL FIXED COSTS	$ 65,674		$ 26.33		$ 437.83	
C. LABOUR						
50 hours/wk	$ 26,000		$ 10.42		$ 173.33	
18.8 hours/wk	7,807		3.13		52.04	
TOTAL LABOUR COST	$ 33,806		$ 13.55		$ 225.37	
TOTAL COST OF PRODUCTION	$366,153		$146.81		$2,466.80	

BREAK-EVEN PRICE (carcass)	$/100 kg		$/CWT	
Operating Cost	137.08		62.18	
Operating & Labour Cost	154.45		70.06	
Operating, Labout & Fixed Cost	188.21		85.37	

Break-even Price = Cost per Hog Sold ÷ (Slaughter Wt. X Dressing %)

WEANER PIG COST OF PRODUCTION (150 SOWS)

A. OPERATING COSTS	Total	Your Cost	$/Pig Sold	Your Cost	$/Sow/Yr	Your Cost
1. Feed Costs:						
1.01 Sow Lactation Ration	$ 9,320		$ 3.59		$ 62.13	
1.02 Sow Gestation Ration	19,109		7.36		127.39	
1.03 Boar Ration	1,434		0.55		9.56	
1.04 Creep Feed	1,103		0.42		7.35	
1.05 Starter Ration	24,711		9.52		164.74	
Total Feed Cost	$ 55,676		$21.44		$ 371.17	
2. Other Operating Costs:						
2.01 Vet, Medicine & Supp.:						
Professional Services	$ 1,200		$ 0.46		$ 8.00	
Medication	3,300		1.27		22.00	
2.02 Mtce. & Repairs	2,858		1.10		19.05	
2.03 Hydro (Heat)	8,100		3.12		54.00	
2.04 Insurance	2,483		0.96		16.55	
2.05 Manure Haulage	1,808		0.70		12.05	
2.06 Office Supplies	800		0.31		5.33	
2.07 Marketing & Trans.	2,597		1.00		17.31	
2.08 Sow Replacement	14,811		5.70		98.74	
2.09 Boar Replacement	2,723		1.05		18.15	
Subtotal Op. Costs	$ 96,353		$37.11		$ 642.35	
2.10 Interest on Op.	3,212		1.24		21.41	
TOTAL OPERATING COSTS	**$ 99,564**		**$38.35**		**$ 663.76**	
B. FIXED COSTS						
3. Depreciation:						
3.01 Buildings	$ 6,777		$ 2.61		$ 45.18	
3.02 Equipment	15,015		5.78		100.10	
Total Depreciation Cost	$ 21,792		$ 8.39		$ 145.28	
4. Investment:						
4.01 Buildings	$ 6,777		$ 2.61		$ 45.18	
4.02 Equipment	7,508		2.89		50.05	
4.03 Breeding Herd	6,900		2.66		46.00	
Total Investment Cost	$ 21,185		$ 8.16		$ 141.23	
TOTAL FIXED COSTS	**$ 42,977**		**$16.55**		**$ 286.51**	
C. LABOUR						
50 hours/wk.	$ 26,000		$10.01		$ 173.33	
TOTAL COST OF PRODUCTION	**$168,540**		**$64.91**		**$1,123.60**	

GROWER AND FINISHER PIG COST OF PRODUCTION (2500 Hogs/Year)

A. OPERATING COSTS	Total	Your Cost	$/Hog Sold	Your Cost	$/Pig Place	Your Cost
1. Feed Costs:						
1.01 Grower Ration	$ 51,255		$ 20.55		$ 61.35	
1.02 Finisher Ration	88,917		35.65		106.44	
Total Feed Cost	$140,172		$ 56.20		$167.79	
2. Other Operating Costs:						
2.01 Weanling Cost	$118,722		$ 47.60		$142.11	
2.02 Veterinary Cost	3,242		1.30		3.88	
2.03 Maintenance & Repairs	2,320		0.93		2.78	
2.04 Hydro (Heat)	2,245		0.90		2.69	
2.05 Insurance	2,145		0.86		2.57	
2.06 Manure Haulage	2,020		0.81		2.42	
2.07 Office Supplies	249		0.10		0.30	
2.08 Marketing & Transportation	5,612		2.25		6.72	
2.09 Death Loss	4,938		1.98		5.91	
2.10 Stabilization Premium Cost	7,482		3.00		8.96	
Subtotal Op. Costs	$289,148		$115.93		$346.12	
2.11 Interest on Operating Cost	9,378		3.76		11.23	
TOTAL OPERATING COSTS	**$298,526**		**$119.69**		**$357.34**	
B. FIXED COSTS						
3. Depreciation:						
3.01 Buildings	$ 5,986		$ 2.40		$ 7.17	
3.02 Equipment	11,274		4.52		13.49	
Total Depreciation Cost	$ 17,260		$ 6.92		$ 20.66	
4. Investment:						
4.01 Buildings	$ 5,986		$ 2.40		$ 7.17	
4.02 Equipment	5,637		2.26		6.75	
Total Investment Cost	$ 11,623		$ 4.66		$ 13.91	
TOTAL FIXED COSTS	**$ 28,882**		**$ 11.58**		**$ 34.57**	
C. LABOUR						
18.8 hrs/week @ $8/hr.	$ 7,807		$ 3.13		$ 9.34	
TOTAL COST OF PRODUCTION	**$335,215**		**$134.40**		**$401.26**	

BREAK-EVEN PRICE (carcass)	$/CWT		$/100 kg	
Operating Cost	69.60		153.45	
Operating & Labour Cost	71.42		157.46	
Operating, Labour & Fixed Cost	78.16		172.31	

Break-even Price = Cost per Hog Sold X Dressing Wt. ÷ (Slaughter %)

WEANER PIG PRODUCTION COSTS - MARCH, 1989

ASSUMPTIONS

1. This Budget outlines the cost of production for a 150 Sow Farrowing operation.
2. Buildings and Equipment are valued at new cost.
3. Home-Mixed feed is used. Ingredients are purchased and delivered to farm.
4. Manure Haulage is contracted out.
5. Gilts are purchased for herd replacement.

TABLE 1 INDICATORS OF PRODUCTIVITY

Sows	150
Boars	9
Litters/Sow/Year	2.10
Average Weaning Age	28
Average Born Alive per Litter	10.00
Percent Pre-Weaning Mortality	15.0
Percent Post-Weaning Mortality	3.0

TABLE 2 HERD PROFILE

	TOTAL	/SOW	/LITTER	% MORTALITY
Sows	150			
Boars	9			
Litters	315	2.10		
Pigs Born Alive	3,150	21.00	10.00	
Pigs Died, Pre-Weaning	473	3.15	1.50	15.0
Pigs Weaned	2,677	17.85	8.50	
Pigs Died, Post-Weaning	80	0.53	0.25	3.0
Weaner Pigs Sold	2,597	17.31	8.24	

TABLE 3 FEED REQUIREMENTS AND COSTS

		Feed Costs	
	Requirement	Purchased	Home-Mixed
Dry Sow Ration	2.3 kg/day	$ 0.00	$180.88/tonne
Nursing Sow Ration	4.7 kg/day	$ 0.00	$224.80/tonne
Boar Ration	2.3 kg/day	$ 0.00	$189.81/tonne
Creep Feed	0.5 kg/pig	$17.50 /25 kg	
Starter Ration	27.0 kg/pig	$ 0.00	$352.48/tonne

TABLE 4 WEANER PIG EFFICIENCY

Days Post-Weaning	38 days
Target Weaning Weight	5.0 kg
Target Sale Weight	20.0 kg
Feed Conversion Ratio	1.80 kg starter ration/kg weight gain
Average Daily Gain	0.39 kg weight gain/day post-weaning

TABLE 5 CAPITAL COSTS - SOW BARN (See Footnote *)

	ft^2	Your Farm	$/ft^2$	Your Farm	TOTAL	Your Farm	/SOW	Your Farm
Buildings								
Gestation	4,050		$12.00		$ 48,600		$ 324.00	
Farrowing/Nursing	4,725		14.00		66,150		441.00	
Office & Loading	200		19.00		3,800		25.33	
Feed Mill (building only)					17,000		113.33	
Total Building Cost					$135,550		$ 903.67	
Equipment								
Gestation			$11.00		$ 44,550		$ 297.00	
Farrowing/Nursing			$16.00		75,600		504.00	
Feed Mill (equipment only)					30,000		200.00	
Total Equipment Cost					$150,150		$1,001.00	
Total Buildings & Equipment Cost					$285,700		$1,904.67	
Breeding Stock								
Value of Replacement Sow		$400 /sow			$ 60,000		$ 400.00	
Value of Replacement Boar		$1,000 /boar			9,000		60.00	
Total Breeding Stock Cost					$ 69,000		$ 460.00	
TOTAL CAPITAL INVESTMENT					$354,700		$2,364.67	

*FOOTNOTE:
THE NUMBER OF SQUARE FEET IN THE BUILDING, AND THE COST PER SQUARE FOOT FOR BUILDINGS AND EQUIPMENT ARE APPROXIMATIONS ONLY. A certified building plan which is designed according to sow herd size and productivity must be used to calculate accurate dimensions and area for new buildings. See your local Agricultural Engineer for assistance.

Feed Mill cost will vary with capacity. See Information Update entitled "Hogfeed".

FEED REQUIREMENT AND COST SUMMARY - Prices given are for March 1/89, Winnipeg

DRY SOW RATION:	Ingredients	$/tonne	Ration Cost
Barley	650 kg	$ 133.00	$ 86.45
Wheat	250	$ 162.00	$ 40.50
Sub-total			$126.95
Soybean Meal	50	$ 337.00	$ 16.85
Premix	50	$ 606.00	$ 30.30
(20% Ca, 7.5% Phos, Lysine 1.5%)			
TOTAL FOR DRY SOW:	1,000 kg		$174.10
TOTAL COST ADJUSTED FOR WEIGHT LOSS		2%	$177.58
ADJUSTED COST PLUS PROCESSING COST		$ 3.30	$180.88

NURSING SOW RATION:	Ingredients	$/tonne	Ration Cost
Barley	390 kg	$ 133.00	$ 51.87
Wheat	390	$ 162.00	$ 63.18
Sub-total			$115.05
Soybean Meal	130	$ 337.00	$ 43.81
Premix	50	$ 606.00	$ 30.30
(20% Ca, 7.5% Phos, Lysine 1.5%)			
Canola Oil	40	$ 700.00	$ 28.00
TOTAL FOR NURSING SOW:	1,000 kg		$217.16
TOTAL COST ADJUSTED FOR WEIGHT LOSS		2%	$221.50
ADJUSTED COST PLUS PROCESSING COST		$ 3.30	$224.80

BOAR RATION:	Ingredients	$/tonne	Ration Cost
Barley	650 kg	$ 133.00	$ 86.45
Wheat	200	$ 162.00	$ 32.40
Sub-total			$118.85
Soybean Meal	100	$ 337.00	$ 33.70
Premix	50	$ 606.00	$ 30.30
(20% Ca, 7.5% Phos, Lysine 1.5%)			
TOTAL FOR BOAR:	1,000 kg		$182.85
TOTAL COST ADJUSTED FOR WEIGHT LOSS		2%	$186.51
ADJUSTED COST PLUS PROCESSING COST		$ 3.30	$189.81

STARTER RATION:	Ingredients	$/tonne	Ration Cost
Wheat	730	$ 162.00	$118.26
Sub-total			$118.26
Soybean Meal	110	$ 337.00	$ 37.07
Canola Oil	10	$ 700.00	$ 7.00
Supplemental Protein (Base Mix)	150	$1,200.00	$180.00
(25% CP, 6% Ca, 3% Phos, 3.5% Lysine)			
TOTAL FOR STARTER:	1,000 kg		$342.33
TOTAL COST ADJUSTED FOR WEIGHT LOSS		2%	$349.18
ADJUSTED COST PLUS PROCESSING COST		$ 3.30	$352.48

Nutrient Profile:	Dry Sow Ration	Nursing Sow Ration	Starter Ration
Crude Protein (%)	12.8	15.1	18.0
Metabolizable energy (KCal/kg)	2960	3180	3300
Lysine	0.50	0.68	1.15
Calcium	1.06	1.07	1.00
Phosphorus	0.90	0.91	0.81

GROWER & FINISHER PIG PRODUCTION COSTS - MARCH, 1989

ASSUMPTIONS

1. This Budget outlines the cost of production for a 2500 pig grower-finisher operation only.
2. Buildings and Equipment are valued at new cost.
3. Home-Mixed Feed is used.
4. Manure Haulage is contracted out.
5. Livestock values are based on a Market Price for Pork of: $165.00/100 kg
   or: $0.75/lb Dressing % = 78

TABLE 1 INDICATORS OF PIG PRODUCTIVITY

	Grower	Finisher	Total
No. of Pigs (Beginning)	2,597	2,545	--
Average Beginning Weight (kg)	20.0	50.0	--
Average Ending Weight (kg)	50.0	100.0	--
Percent Mortality	2.0	2.0	4.0
Days on Feed	50	70	120
Feed Conversion Ration (1)	2.80	3.50	3.24
No. of Pigs (Ending)	2,545	2,494	--
Weight Gain/Pig (kg)	30.0	50.0	80.0
Feed Intake/Pig (kg)	84.0	175.0	259.0
Average Daily Gain (kg)	0.60	0.71	0.67
Average No. of Pigs in Barn (2)	352	483	835

(1) FOOTNOTE: The Feed Conversion Ratio in the "Total" column is a weighted average of the other feed conversion ratios. Also note that an accurate feed conversion ratio for the grower-finisher enterprise is calculated by dividing "total Feed used per Year" by "Total Gain per Year"; where "Total Gain per Year" equals "Total Hogs Sold" times "Gain per Hog". When calculated in this way, the feed conversion ratio includes feed lost through wastage and weight gain lost through death of pigs.

(2) FOOTNOTE: Assume that "Avg. No. of Pigs in Barn" equals "Pig Places".

TABLE 2 PRODUCTIVITY PROFILE

	Total	
Pigs Purchased	2,597	
Pigs Died	104	4.0% mortality *
Pigs Sold	2,494	
Turnover (365 ÷ days on feed)	3.04	

TABLE 3 FEED REQUIREMENTS AND COSTS

	FCR*	kg/pig	Ration Cost Home-mixed
Grower Ration	2.80	84.0	$244.69/tonne
Finishing Ration	3.50	175.0	$203.71/tonne

* FCR = Feed Conversion Rate

TABLE 4 CAPITAL COSTS - GROWER AND FINISHER BARN (1200 Pigs/Year)

	ft^2	Your Farm	$/ft^2$	Your Farm	TOTAL	Your Farm	/Pig Place	Your Farm
Buildings								
Finishing Barn	7,519	_____	$13.00	_____	$ 97,743	_____	$ 117.00	_____
Office & Loading	288	_____	$18.00	_____	5,184	_____	6.21	_____
Feed Mill (building only)					17,000	_____	20.35	_____
Total Building Cost					$119,927	_____	$ 143.55	_____
Equipment								
Finishing Barn			$11.00	_____	82,705	_____	99.00	_____
Feed Mill (equipment only)					30,000	_____	35.91	_____
Total Equipment Cost					$112,705	_____	$134.91	_____
Total Buildings and Equipment Cost					$232,632	_____	$278.47	_____
Livestock (see Footnote *)					$ 74,330	_____	$ 88.98	_____
TOTAL CAPITAL INVESTMENT					$306,963	_____	$367.44	_____

FOOTNOTE: THE NUMBER OF SQUARE FEET IN THE BUILDING, AND THE COST PER SQUARE FOOT FOR BUILDINGS AND EQUIPMENT ARE APPROXIMATIONS ONLY. A certified building plan which is designed according to average inventory of grower-finisher pigs must be used to calculate accurate dimensions and area for new buildings. See your local Agricultural Engineer for assistance. Cost per square foot may vary according to desired productivity level. In this program, 9.00 ft^2 per pig place is used. Average inventory of pigs is assumed to equal average number of pig places.

Feed Mill cost will vary with capacity. See Information Update entitled "HogFeed".

*FOOTNOTE: Livestock Investment is calculated as follows:

$$\frac{[\text{Weaner Cost} + (\text{Pork Price} \times \text{Slaughter Weight} \times \text{Dressing \%})]}{2} \times \text{Average in Barn}$$

Where: Value of Carcass = $\frac{\text{Finisher Ending Weight X Dressing \% X Market Price (¢/kg)}}{100}$

FEED REQUIREMENT AND COST SUMMARY - Prices given are for March 1/89, Winnipeg

GROWER RATION:	Ingredients	$/tonne	Ration Cost
Barley	375 kg	$ 133.00	$ 49.88
Wheat	375	$ 162.00	$ 60.75
Sub-total			$110.63
Soybean Meal	190	$ 337.00	$ 64.03
Premix (20%Ca, 7.5% Phos, Lysine 1.5%)	50	$1,100.00	$ 55.00
Canola Oil	10	$ 700.00	$ 7.00
TOTAL FOR GROWER:	1,000 kg		$236.66
TOTAL COST ADJUSTED FOR WEIGHT LOSS		2%	$241.39
ADJUSTED COST PLUS PROCESSING COST		$ 3.30	**$244.69**

FINISHER RATION:	Ingredients	$/tonne	Ration Cost
Barley	515 kg	$ 133.00	$ 68.50
Wheat	280	$ 162.00	$ 45.36
Sub-total			$113.86
Soybean Meal	160	$ 337.00	$ 53.92
Premix (20%Ca, 7.5% Phos, Lysine 1.5%)	35	$ 620.00	$ 21.70
Canola Oil	10	$ 700.00	$ 7.00
TOTAL FOR FINISHER:	1,000 kg		$196.48
TOTAL COST ADJUSTED FOR WEIGHT LOSS		2%	$200.41
ADJUSTED COST PLUS PROCESSING COST		$ 3.30	**$203.71**

Nutrient Profile:	Grower Ration	Finisher Ration
Crude Protein (%)	17.4	16.5
Metabolizable energy (KCal/kg)	3060	3080
Lysine	0.88	0.81
Calcium	0.99	0.78
Phosphorous	0.79	0.65

WEANER PIG PRODUCTION COSTS - MARCH 1989

WORKSHEET

A. OPERATING COSTS

1. Feed Requirements and Costs:

1.01 Sow Lactation Ration

		Your Farm
	28 days Average Weaning Age	
X	2.10 litters/sow/year	
=	58.8 days lactation	
X	4.7 kg ration/day	
X	$224.80 /tonne ration	
÷	1,000 kg/tonne	
=	**$62.13 /sow/year**	

1.02 Sow Gestation Ration

	365 days/year	
-	58.8 days lactation	
=	306.2 days gestation	
X	2.3 kg ration/day	
X	$180.88 /tonne ration	
÷	1,000 kg/tonne	
=	**$127.39 /sow/year**	

1.03 Boar Ration

	365 days	
X	2.3 kg ration/day	
X	$189.81 /tonne ration	
÷	1,000 kg/tonne	
X	9 boars	
÷	150 sows	
=	**$9.56 /sow/year**	

1.04 Creep Feed

	0.5 kg ration/pig	
X	$17.50 /25 kg bag of creep feed	
÷	25 kg/bag	
X	21 pigs born alive/sow/year	
=	**$7.35 /sow/year**	

1.05 Starter Ration			Your Farm
	20.0 kg	Target Sale Weight	
-	5.0 kg	Target Weaning Weight	
=	15.0 kg	Weight Gain	
X	1.80	Feed Conversion Ratio	
=	27 kg	ration/pig	
X	$352.48	/tonne starter ration	
÷	1,000 kg	/tonne	
X	17.31	pigs sold/sow/year	
=	**$164.74**	**/sow/year**	

2. Other Operating Costs:

				Your Farm
2.01	**Veterinary Medicine & Supplies**			
	Professional Services		$8.00 /sow/year	
	Medication		$22.00 /sow/year	
2.02	**Maintenance & Repairs**			
	Building & Equipment cost		$1,904.67 /sow	
	Percent for Rep. & Mtce.	X	1.00 % /sow/year	
			$19.05 /sow/year	
2.03	**Electric Heat**			
	Usage		1,200 kwh/sow	
	Rate	X	$0.0450 /kwh	
			$54.00 /sow/year	
2.04	**Insurance**			
	Total Capital Investment		$2,364.67 /sow	
	Insurance/$100 Capital	X	$0.70 /$100 Capital	
		÷	100	
			$16.55 /sow/year	
2.05	**Manure Haulage**			
	Volume		30.0 litres/sow/day	
		÷	1,000 litres/cubic m	
		=	0.0300 cubic metres	
	Haulage rate	X	$1.10 /cubic metre	
		X	365 days	
			$12.05 /sow/year	
2.06	**Office Supplies**			
	Minimum Cost		$500.00	
	plus:			
	Number of Sows 150 sows			
	X Fixed Rate/Sow $2.00 /sow		$300.00	
			$800.00	
		/	150 sows	
			$5.33 /sow/year	

2.07 Marketing & Transportation

			Your Farm
Weaner pigs sold		17.31 pigs/sow/year	
Mktg. & Trans. rate	X	$1.00 /pig sold	
		$17.31 /sow/year	

2.08 Sow Replacement

				Your Farm
Value of Replacement Sow			$400.00 /sow	
less:				
Cull sow weight	180.0 kg/sow			
X Cull sow price	$0.70 /kg			
X Sow Dressing %	80 %			
Value of Cull Sow		-	$100.80 /sow	
Net Replacement Cost		=	$299.20	
Sow Culling Rate		X	33.00 percent	
Sow Replacement Cost/Sow			**$98.74 /sow/year**	

2.09 Boar Replacement

				Your Farm
Value of Replacement Boar			$1,000.00 /boar	
less:				
Cull Boar wt.	225.0 kg/boar			
Cull Boar price	$0.37 /kg live			
Value of Cull Boar		-	$83.25 /boar	
Net Replacement Cost		=	$916.75	
Boar Culling Rate		X	33.00 %	
Number of Boars in Herd		X	9 boars	
Number of Sows in Herd		÷	150 sows	
Boar Replacement Cost/Sow			**$18.15 /sow/year**	

2.10 Interest on Operating Cost:

$$\text{Sub-total Operating Cost} \times \frac{\text{Farrow-to-Farrow Period}}{365} \times \frac{\text{\% Interest}}{2}$$

			Your Farm
Sub-Total Operating Cost	=	$642.34 /sow	
Farrow-to-Farrow Period:			
$= \frac{365}{\text{litters/sow/year}} = \frac{365}{2.10}$	=	174 days	
Operating Interest Rate		14 %	
		$21.41 /sow/year	

B. FIXED COSTS		Your Farm
3. Depreciation: Original Cost - Salvage Value / Useful Life		
3.01 Buildings		
Total Building Cost	$903.67 /sow	
Salvage Value	- $0.00 /sow	
Useful Life	÷ 20 years	
	= **$45.18 /sow/year**	
3.02 Equipment		
Total Equipment Cost	$1,001.00 /sow	
Salvage Value	- $0.00 /sow	
Useful Life	÷ 10 years	
	$100.10 /sow/year	
4. Investment: (Original Cost + Salvage Value) / 2 X Investment Rate		
Investment Rate = 10.00 %		
4.01 Buildings		
Total Building Cost	$903.67 /sow	
Salvage Value	$0.00 /sow	
	$ 45.18 /sow/year	
4.02 Equipment		
Total Equipment Cost	$1,001.00 /sow	
Salvage Value	$0.00 /sow	
	$50.05 /sow/year	
4.03 Breeding Stock		
Average Value of Breeding Stock	$460.00 /sow	
	$ 45.00 /sow	
C. LABOUR		
Total Hours per 7-Day Week	50.0 hours/week	
	X 52 weeks/year	
Hourly Wage	X $10 /hour	
	X 150 sows	
	=**$173.33 /sow/year**	

GROWER & FINISHER PIG PRODUCTION COSTS - MARCH, 1989

WORKSHEET

A. OPERATING COSTS

1. Feed Requirements and Costs:

1.01 Grower Ration

		Your Farm
	30.0 kg weight gain/pig	
X	2.80 Feed Conversion Ratio	
=	84.0 kg ration/pig	
X	$244.69 /tonne ration	
÷	1,000 kg/tonne	
=	$20.55 /pig sold	

1.02 Finisher Ration

	50.0 kg weight gain/pig	
X	3.50 Feed Conversion Ratio	
=	175.0 kg ration/pig	
X	$203.71 /tonne ration	
÷	1,000 kg/tonne	
=	$35.65 /pig sold	

2. Other Operating Costs

2.01 Weanling Cost

	$ 1.40 /kg, non-stabilized pork price	
X	1.7 factor	
X	20.0 kg, weaner pig weight	
=	$47.60 /pig sold	

2.02 Veterinary Cost

	$1.25 /pig purchased	
X	2,597 pigs purchased	
÷	2,494 pigs sold	
=	$1.30 /pig sold	

2.03 Maintenance & Repairs

	1 % of Total Capital Investment	
X	$232,632 Total Buildings & Equip. Cost	
÷	2,494 pigs sold	
=	$0.93 /pig sold	

2.04 Hydro (Heat)

		Your Farm
	60 kilowatt hours/pig place	
X	$0.0450 /kilowatt hour	
X	835 pig places	
÷	2,494 pigs sold	
=	$0.90 /pig sold	

2.05 Insurance

	$0.70 per $100 Capital Invested	
÷	100	
X	$306,963 Total Capital Invested	
÷	2,494 pigs sold	
=	$0.86 /pig sold	

2.06 Manure Haulage

	6.0 litres/pig/day	
X	365 day/year	
X	835 average inventory of pigs	
=	1,829,545 litres/year	
÷	1,000 litres/cubic metre	
=	1,829.54 cubic metres/year	
X	1.10 /cubic metre	
=	$2,012.50 manure haulage cost	
÷	2,494 pigs sold	
=	$0.81 /pig sold	

2.07 Office Supplies

	$0.30 /pig place	
X	835 pig places	
÷	2,494 pigs sold	
=	$0.10 /pig sold	

2.08 Marketing & Transportation

	$2.25 /pig sold	

2.09 Death Loss

	$47.60 /pig purchased	
X	104 pigs died	
÷	2,494 pigs sold	
=	$1.98 /pig sold	

Note: Because costs are expressed on a per hog "sold" basis death loss has already been taken into account. The only exception to this is the weanling cost, which is expressed on a per pig "purchased" basis. For this reason, death loss is included here.

2.10 Interest on Operating Cost

Your Farm

$$(Wc \times \frac{DOF}{365} \times \%Int) + [(SOC - WC) \times \frac{DOF}{365} \times \frac{\%Int}{2}]$$

WC = Weaner Cost
DOF = Day on Feed
%Int = % Operting Interest Rate
SOC = Sub-total Operating Cost

	$47.60 /pig	
	120 days	
	14 %	
	$115.93 /pig sold	
=	$3.76 /pig sold	

B. FIXED COSTS

3. Depreciation: $\frac{\text{Original Cost - Salvage Value}}{\text{Useful Life}}$

3.01 Buildings

Total Building Cost	$119,927	
Total Salvage Value	- $0.00	
	= $119,927	
Useful Life (years)	÷ 20	
Pigs Sold	÷ 2,494	
	$2.40 /pig sold	

3.02 Equipment

Total Equipment Cost	$112,705	
Salvage Value	$0.00	
Useful Life	- 10	
	= $4.52 /pig sold	

4. Investment: $\frac{\text{(Original Cost + Salvage Value)}}{2}$ X Investment Rate

4.01 Buildings

Total Building Cost	$119,927	
Salvage Value	+ $0.00	
	= $119,927	
	÷ 2	
Investment Rate	X 10 %	
Pigs Sold	÷ 2,494	
	$2.40 /pig sold	

4.02 Equipment

Total Equipment Cost	$112,705	
Salvage Value	+ $0.00	
	= $2.26 /pig sold	

C. LABOUR

Your Farm

Annual Labour Hours = 1 Hours/Day + 2 Hours/Day per 1,000 Pig Places

1 Hour/Day	=	365 Hours/Year	_____
plus:			
835 pig places			
X 2 hours/day/1,000 pig places			
X 365 day/year			
÷ 1,000 pig places	+	610 hours/year	_____
Total Hours/Year	=	975 hours/year	_____
Total Hours/Week	(or =)	18.8 hours/week	_____
Hourly Wage	X	$8.00 /hour	_____
Pigs Sold	÷	2,494 pigs sold	_____
		$3.13 / pig sold	_____

OTHER EQUATIONS:

1. Percent Mortality = $\frac{\text{Pigs Died}}{\text{Pigs Purchased}}$

2. Average Feed Conversion Ratio (FCR) =

   (g = grower)
   (f = feeder)

   $$\frac{(FCR^g \times \text{Wt. Gain}^g) + (FCR^f \times \text{Wt. Gain}^f)}{\text{Total Weight Gain/pig}}$$

3. Average Daily Gain (ADG) = $\frac{\text{Total Weight Gain/pig}}{\text{Days on Feed}}$

4. Feed Intake/pig = Total Weight Gain/pig X FCR avg.

5. Potential Throughput = Pig Places X Turnover

6. Percent Utilization of Barn = $\frac{\text{Average Inventory}}{\text{Pig Places}}$

7. Break-Even Price (¢/kg) = $\frac{\text{Total Cost of Production/pig sold}}{\text{Dressing \%}}$

   ($/lb) = $\frac{\text{Total Cost of Production/pig sold}}{\text{Dressing \% X 220.46}}$

FOR MORE INFORMATION SEE YOUR LOCAL MANITOBA AGRICULTURE OFFICE.

If you would like to run a number of alternatives on computer, please contact your local Manitoba Agriculture Office.

Budget Prepared By:

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WEANER PIG PRODUCTION COSTS
COMPUTER INPUT FORM

INDICATORS OF PRODUCTIVITY

Sows	_____
Boars	_____
Litter/Sow/Year	_____
Average Weaning Age (days)	_____
Average Born Alive per Litter	_____
Percent Pre-Weaning Mortality	_____
Percent Post-Weaning Mortality	_____

FEED REQUIREMENTS AND COSTS

			Purchased Cost	Home-Mixed Cost (See Feed Table)
Dry Sow Ration	_____	kg/sow/day	_____ $/tonne	_____ $/tonne
Nursing Sow Ration	_____	kg/sow/day	_____ $/tonne	_____ $/tonne
Boar Ration	_____	kg/boar/day	_____ $/tonne	_____ $/tonne
Creep Feed	_____	kg/pig/day	_____ $/25 kg bag	_____ $/25 kg bag
Starter Ration	_____	kg/pig/day	_____ $/tonne	_____ $/tonne

WEANER PIG EFFICIENCY

Days Post-Weaning	_____ days
Target Weaning Weight	_____ kg
Target Sale Weight	_____ kg

OTHER OPERATING COSTS

Vet. Cost: Professional Service		_____	$/sow
Medication		_____	$/sow
Maintenance & Repair		_____	% of Total Capital Investment
Electric Heat: total cost _____	or	_____	kilowatt hours/sow (See Information Update pg. 13)
	x	_____	/kilowatt hour (See Information Update pg. 13)
Insurance		_____	$/$100 Capital Invested
Manure Haulage: total cost _____	or	_____	litres/sow/day ** (See Footnote & Info. Update pg. 13)
		_____	$/cubic metre (See Footnote & Info. Update pg. 13)
Marketing & Transportation		_____	$/weaner pig sold
Breeding Herd Replacement:		_____	% of sows replaced per year
Cull Sow Weight		_____	kg
Cull Sow Price		_____	$/kg (carcass)
Value of Replacement Sow		_____	$/boar
Boar Replacement		_____	% of boars replaced per year
Cull Boar Weight		_____	kg
Cull Boar Price		_____	$/kg (carcass)
Value of Replacement Boar		_____	$/sow
Operating Loan Interest Rate		_____	%

FIXED COSTS

Depreciation (straight line):	
Useful Life:	
Buildings	_____ years
Equipment	_____ years
Salvage Value (% of original cost):	
Buildings	_____ %
Equipment	_____ %
Investment Interest Rate	_____ %

LABOUR

Total Person-Hours per 7-day week	_____ person-hours/week
Hourly Wage	_____ $/hour

CAPITAL COSTS: SOW BARN ONLY

	ft^2	$/ft^2$	Total Cost
Buildings			
Gestation	_____	_____	_____
Farrowing/Nursing	_____	_____	_____
Office & Loading	_____	_____	_____
Feed Mill (building only)			_____
			_____
Equipment (See Footnote **)			
Gestation	_____	_____	_____
Farrowing/Nursing	_____	_____	_____
Feed Mill (equipment only)			_____

** FOOTNOTE:
1 cubic metre = 1000 litres 1 cubic metre = 35.314 cubic feet 1 cubic metre = 219.97 imperial gallons

GROWER-FINISHER PIG PRODUCTION COSTS
COMPUTER INPUT FORM

Market Price for Pork of: _____ $/100 kg or: _____ $/lb Market Index _____ Dress % _____

INDICATORS OF PRODUCTIVITY	GROWER	FINISHER
No of Pigs (Beginning)	_____	_____
Average Beginning Weight (kg)	_____	_____
Average Ending Weight (kg)	_____	_____
Percent Mortality	_____	_____
Days on Feed	_____	_____
Feed Conversion Ratio (Feed:Gain)	_____	_____

FEED REQUIREMENTS AND COSTS		Purchased Cost	Home-Mixed Cost (See Feed Table)
Grower Ration	_____ kg/pig/day	_____ $/tonne	_____ $/tonne
Finishing Ration	_____ kg/pig/day	_____ $/tonne	_____ $/tonne

OTHER OPERATING COSTS

Veterinary Costs: Professional & Medication		_____	$/weaner pig purchased
Maintenance & Repair		_____	% of Total Capital Investment
Electric Heat: total cost _____	or	_____	kilowatt hours/sow (See Information Update pg. 17)
	x	_____	$/kilowatt hour (See Information Update pg. 17)
Insurance		_____	$/$100 Capital Invested
Manure Haulage: total cost _____	or	_____	litres/sow/day ** (See footnote & Info. Update pg. 17)
	x	_____	$/cubic metre
Marketing & Transportation		_____	$/pig sold
Office Supplies: total cost _____	or	_____	$/pig place
Weanling Cost		_____	$/pig purchased
Stabilization Premium Cost		_____	$/hog sold
Operating Loan Interest %		_____	%

CAPITAL COSTS: FINISHER BARN (See Footnote **)

Buildings	ft^2	$/$ft^2$	Total
Finishing Barn	_____	_____	_____
Office & Loading	_____	_____	_____
Feed Mill (building only)			_____
Equipment (See Footnote **)			
Finishing Barn	_____	_____	_____
Feed Mill (equipment only)			_____

FIXED COSTS

Depreciation (straight line):		
Useful Life:		
Buildings	_____	years
Equipment	_____	years
Salvage Value (% of original cost):		
Buildings	_____	%
Equipment	_____	%
Investment Interest Rate	_____	%

LABOUR

Total Person-Hours per 7-day week	_____	person-hours/week
Hourly Wage	_____	$/hour

** FOOTNOTE:
1 cubic metre = 1000 litres 1 cubic metre = 35.314 cubic feet 1 cubic metre = 219.97 imperial gallons

HOME-MIXED FEED COSTS
COMPUTER INPUT FORM

FEED INGREDIENT COSTS	PRICE
Barley ($/tonne)	
Wheat ($/tonne)	
Corn ($/tonne)	
Soybean Meal - 44%	
Canola Meal ($/tonne)	
Sow & Boar Vit-Min. Premix ($/25 kg bag) [40 bags/tonne]	
Starter Vit-Min. Premix ($/25 kg bag)	
Grower Vit-Min. Premix ($/25 kg bag)	
Finisher Vit-Min. Premix ($/25 kg bag)	
Canola Oil ($/tonne)	
Supplemental Protein ($/tonne)	
Other Ingredients ($/tonne)	
Processing Cost ($/tonne) (Includes Operating & Labour Cost)	

FEED INGREDIENT REQUIREMENTS

Instructions: Input the amount of each ingredient found in one tonne of feed for each pig category. These rations must be nutritionally balanced.

	DRY SOW	NURSING SOW	BOAR RATION
Barley (kg/tonne)			
Wheat (kg/tonne)			
Corn (kg/tonne)			
Soybean Meal (kg/tonne)			
Canola Meal (kg/tonne)			
Vit-Min. Premix (kg/tonne)			
Canola Oil (kg/tonne)			
Supplemental Protein (Base Mix)			
Other Ingredients (kg/tonne)			
TOTAL MUST EQUAL 1,000 kg	1,000 kg	1,000 kg	1,000 kg

WEIGHT RANGE (kg)	STARTER RATION	GROWER RATION	FINISHER RATION
Barley (kg/tonne)			
Wheat (kg/tonne)			
Corn (kg/tonne)			
Soybean Meal (kg/tonne)			
Canola Meal (kg/tonne)			
Vit-Min. Premix (kg/tonne)			
Canola Oil (kg/tonne)			
Supplemental Protein (Base Mix)			
Other Ingredients (kg/tonne)			
TOTAL MUST EQUAL 1,000 kg	1,000 kg	1,000 kg	1,000 kg